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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/096,515	06/12/1998	YUJI INOUE	35.G2190	1905

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EXAMINER

DORSEY, DENNIS

ART UNIT PAPER NUMBER

3637

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/096,515

Applicant(s)

INOUE ET AL.

Examiner

Dennis L Dorsey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-120 is/are pending in the application.
- 4a) Of the above claim(s) 1-3, 5 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 6-12 and 14-120 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made:

2. Claims 4, 6-12, and 14-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoyama et al. in view of Frihart et al.

Itoyama et al. teaches all the limitations of the above claims except the specific composition of the jacket of the connector and electrical lead, the electrical connector contacting the backing material, and the specific composition of the backing material.

Itoyama teaches a solar cell (101), fixed to a metal substrate (107), fixed to a load bearing, water resistance and heat resistance backing material (104), electrically connected (113) between the backing material and building material, spacers (102), power converter (column 3, lines 12-15), and air flow apparatus (see figure 8).

The Applicant's disclosure of the prior art teaches that it is well known for one skill in the art to lengthen the electrical connector causing it to be in contact with the backing material to make connecting the panels easier (page 3, lines 18-25).

The Applicant's disclosure of the prior art further teaches that coating conductive leads is widely used (page 4, lines 7-8). The Applicant's disclosure of the prior art continues to and teaches that it is well known in the art to use a backing material of asphalt, vinyl chloride, polyurethane, or polystyrene (page 4, lines 8-11).

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Frihart et al. teaches a conductive wire coating of a polyamide resin composition for insulation and protection of the wire providing highly desirable properties (see Abstract).

It would have been obvious for one skilled in the art at the time the invention was made to modify the wire coating of the Itoyama reference and select the material as taught by Frihart et al., since it is held to be within the skill of a worker in the art to select a known material as a matter of design choice to provide superior protection of the electrical lead.

It would have been obvious for one skilled in the art at the time the invention was made to pick and choose among the asphalt resins or any of the available materials readily available on the market to use as the backing material or roof board as taught by the Applicant's disclosure of the prior art, since it is held to be within the general skill of a worker in the art to select a suitable material well known in the art.

The Examiner takes the position that since one of the materials was found among the group of materials presented possible and since the materials appear to be equivalent according to the Applicant's disclosure (page 27, line 8-15) and since no criticality is given to one material over the other and since it is the Applicant's intention to cover various modifications and equivalent arrangements of the instant invention (page 33, line 7-9) the different of arrangements of different materials as set forth by the limitations of the newly added claims are functionally equivalent and thus rejected according to the above paragraphs.

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Response to Amendment

3. Applicant's arguments with respect to claims 4 and 6-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis L Dorsey whose telephone number is 703-306-9137. The examiner can normally be reached on Tuesday-Friday 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1020.

DLD 
June 1, 2002

LANNA MAI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

